

## ABSTRACT

1        An intercooler for a vehicle engine incorporating an exhaust gas turbocharger  
2        and an air conditioning system, the intercooler comprising: a charge air cooler loop  
3        operatively connected to cool heated, pressurized air from the turbocharger before it  
4        flows into the vehicle engine; and an air conditioning system bypass loop operatively  
5        connecting the air conditioning system to the charge air cooler loop.